Listing of Claims:

1. (Currently Amended) A method of determining a position of an unknown point in space using at least two cameras aimed ~~such as~~ to have ~~an~~ a substantially overlapping field of view, comprising the steps of,

generating in each of said cameras an image corresponding to at least four points lying in a reference plane, the reference plane being common to the respective images of the cameras;

calculating a planar projective transform that maps said images of said at least four points to a reference frame, said reference frame being a projection of said reference plane;

generating, in each of said cameras, images of at least two calibration markers whose positions relative to said reference plane are known and an image of an unknown point;

for each of said images of said at least two calibration markers and said image of an unknown point, applying said transform to define respective points in a plane of said image ~~plane~~; and

computing at least a distance of said unknown point from said reference plane responsively to at least a depth of said unknown point and coordinates of said unknown point and said at least two points transformed into said reference frame.

2. (Original) A method as in claim 1, wherein said step of computing includes computing a distance of said unknown point from said reference plane responsively to positions of said calibration points.

3. (Original) A method as in claim 2, wherein said positions indicate a distance of said calibration points from said reference plane.

4. (Original) A method as in claim 1, wherein said step of generating includes positioning said calibration markers in said overlapping field of view.

5. (Original) A method as in claim 4, wherein said step of positioning includes extending a boom with said markers.

6. (Original) A method as in claim 1, wherein said position includes only a distance from said reference plane.

7. (Currently Amended) A strap-down three-dimensional reconstruction system, comprising:

a jig supporting at least two cameras;

said jig having a structure to support at least two calibration markers in a position ~~such as~~ to be substantially visible by said at least two cameras; and

said jig also supporting at least four reference markers in a visual field of each of said at least two cameras, all of said reference markers lying in a common plane~~.~~ ;

wherein said at least two cameras are used to determine a position of an unknown point in space according to the method of claim 1.

8. (Original) A system as in claim 7, wherein said four reference markers are corners of an aperture in a screen of said jig.

9. (Original) A system as in claim 7, wherein said four reference markers are projected onto a screen.

10. (Original) A system as in claim 7, further comprising an image processing computer connected to receive said images from said cameras and programmed to

calculate a position of a point visible in each of said cameras responsively to position data corresponding to said calibration markers.

11. (Currently Amended) A method of determining a position of an unknown point in space using at least two cameras aimed ~~such as~~ to have ~~an~~ a substantially overlapping field of view, comprising the steps of,

generating in each of said cameras an image corresponding to at least four points lying in a reference plane, the reference plane being common to the respective images of the cameras;

calculating a planar projective transform that maps said images of said at least four points to a reference frame, said reference frame being a projection of said reference plane;

generating, in each of said cameras, images of at least two calibration markers whose positions relative to said reference plane are known;

transforming, by said planar projective transform, each of said images of calibration markers;

computing optical centers responsively to a result of said step of ~~step of~~ transforming;

generating in each of said cameras an image of an unknown point and calculating a position of said unknown point responsively to a result of said step of computing.

12. (Original) A method as in claim 11, wherein said step of calculating includes transforming said images of said unknown point using said planar projective transform.

13. (New) A strap-down three-dimensional reconstruction system, comprising:

a jig supporting at least two cameras;

said jig having a structure to support at least two calibration markers in a position to be visible by said at least two cameras; and

said jig also supporting at least four reference markers in a visual field of each of said at least two cameras, all of said reference markers lying in a common plane

wherein said at least two cameras are used to determine a position of an unknown point in space according to the method of claim 11.

14. (New) A system as in claim 13, wherein said four reference markers are corners of an aperture in a screen of said jig.

15. (New) A system as in claim 13, wherein said four reference markers are projected onto a screen.

16. (New) A system as in claim 13, further comprising an image processing computer connected to receive said images from said cameras and programmed to calculate a position of a point visible in each of said cameras responsively to position data corresponding to said calibration markers.